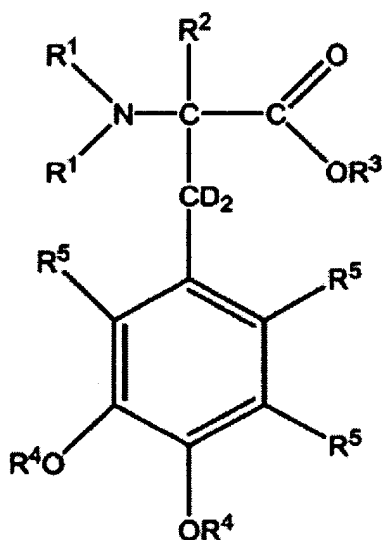


Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Original) Deuterated catecholamine derivatives of the general formula I



Formula I

wherein

R¹ is H or D, R² indicates H or D, R³ is H, D, C₁-C₆ alkyl or C₅ to C₆-cycloalkyl, deuterated C₁ to C₆-alkyl or C₅ to C₆-cycloalkyl, R⁴ indicates H or D and R⁵ is H or D.

2. (Original) Deuterated catecholamine derivatives according to claim 1, wherein R¹ is H or D, R² indicates H or D, R³ is H, D, C₁ to C₆-alkyl or C₅ to C₆-cycloalkyl, deuterated C₁ to C₆-alkyl or deuterated C₅ to C₆-cycloalkyl, R⁴ indicates H or D and R⁵ is D.

3. (Original) Deuterated catecholamine derivatives according to claim 1, wherein R^1 is H or D, R^2 indicates D, R^3 is D, C_1 to C_6 -alkyl or C_5 to C_6 -cycloalkyl, deuterated C_1 to C_6 -alkyl or deuterated C_5 to C_6 -cycloalkyl, R^4 indicates H or D and R^5 is D.

4. (Original) Deuterated catecholamine derivatives according to claim 1, wherein R^1 is H or D, R^2 indicates D, R^3 is H, D, C_1 to C_6 -alkyl or C_5 to C_6 -cycloalkyl, deuterated C_1 to C_6 -alkyl or deuterated C_5 to C_6 -cycloalkyl, R^4 indicates H or D and R^5 is D.

5. (Currently amended) Deuterated catecholamine derivatives according to the general formula I of claim 1, wherein R^1 is H or D, R^2 indicates D, R^3 is C_1 to C_6 -alkyl or C_5 to C_6 -cycloalkyl, R^4 indicates H or D and R^5 is D.

6. (Original) Deuterated catecholamine derivatives according to claim 1, wherein R^1 is H or D, R^2 indicates D, R^3 is methyl, R^4 indicates H or D and R^5 is D.

7. (Original) Deuterated catecholamine derivatives according to claim 1, wherein R^1 is H or D, R^2 indicates D, R^3 is ethyl, R^4 indicates H or D and R^5 is D.

8. (Original) Deuterated catecholamine derivatives according to claim 1, wherein R^1 is H or D, R^2 indicates D, R^3 is perdeuteroethyl, R^4 indicates H or D and R^5 is D.

9. (Original) Deuterated catecholamine derivatives according to claim 1, wherein R^1 is H or D, R^2 indicates H or D, R^3 is perdeuteroethyl, R^4 indicates H or D and R^5 is D.

10. (Original) Deuterated catecholamine derivatives according to claim 1, wherein R^1 is H or D, R^2 indicates H or D, R^3 is perdeuteroethyl, R^4 indicates D and R^5 is H or D.

11. (Currently amended) Deuterated catecholamine derivatives of the general formula I according to claim 1 selected from the group consisting of

L-2-amino-3,3-dideutero-3-(3,4-dihydroxyphenyl) propionic acid;

L-2-amino-3,3-dideutero-3-(3,4-dihydroxyphenyl) methyl propionate;

L-2-amino-3,3-dideutero-3-(3,4-dihydroxyphenyl) ethyl propionate;

L-2-amino-3,3-dideutero-3-(3,4-dihydroxyphenyl) cyclohexyl propionate;

L-2-amino-3,3-dideutero-3-(3,4-dihydroxyphenyl) perdeuteromethyl propionate;

L-2-amino-3,3-dideutero-3-(3,4-dihydroxyphenyl) perdeuteroethyl propionate;

L-2-amino-3,3-dideutero-3-(3,4-dihydroxyphenyl) perdeuterocyclohexyl propionate;

L-2-amino-2,3,3-trideutero-3-(3,4-dihydroxyphenyl) propionic acid;

L-2-amino-2,3,3-trideutero-3-(3,4-dihydroxyphenyl) methyl propionate;

L-2-amino-2,3,3-trideutero-3-(3,4-dihydroxyphenyl) ethyl propionate;

L-2-amino-2,3,3-trideutero-3-(3,4-dihydroxyphenyl) cyclohexyl propionate;

L-2-amino-2,3,3-trideutero-3-(3,4-dihydroxyphenyl) perdeuteromethyl propionate;

L-2-amino-2,3,3-trideutero-3-(3,4-dihydroxyphenyl) perdeuteroethyl propionate;

L-2-amino-2,3,3-trideutero-3-(3,4-dihydroxyphenyl) perdeuterocyclohexyl propionate;

L-2-amino-2,3,3-trideutero-3-(2,3,6-trideutero-4,5-dihydroxyphenyl) propionic acid;
L-2-amino-2,3,3-trideutero-3-(2,3,6-trideutero-4,5-dihydroxyphenyl) methyl propionate;
L-2-amino-2,3,3-trideutero-3-(2,3,6-trideutero-4,5-dihydroxyphenyl) ethyl propionate;
L-2-amino-2,3,3-trideutero-3-(2,3,6-trideutero-4,5-dihydroxyphenyl) cyclohexyl propionate;
L-2-amino-2,3,3-trideutero-3-(2,3,6-trideutero-4,5-dihydroxyphenyl) perdeuteromethyl
propionate;
L-2-amino-2,3,3-trideutero-3-(2,3,6-trideutero-4,5-dihydroxyphenyl) perdeuteroethyl
propionate;
L-2-amino-2,3,3-trideutero-3-(2,3,6-trideutero-4,5-dihydroxyphenyl) perdeuterocyclohexyl
propionate;
L-2-amino-2,3,3-trideutero-3-(2,3,6-trideutero-4,5-dideuteroxyphenyl) perdeuterocyclohexyl
propionate; and
L-2-amino-3,3-dideutero-3-(4,5-dideuteroxyphenyl) perdeuterocyclohexyl propionate.

Claims 12-33 (Canceled).

34. (Currently amended) Use of the deuterated catecholamine derivatives according to ~~one of~~ claims claim 1 to 33 as well as physiologically compatible salts thereof, for the treatment of dopamine deficiency diseases or diseases which are based on disrupted tyrosine transport or disrupted tyrosine decarboxylase, such as Parkinson's disease, restless leg syndrome, dystonia, for inhibiting prolactin secretion, for stimulating the release of growth hormone, for the treatment of neurological symptoms of chronic manganese intoxications, of amyotrophic lateral

sclerosis and of multiple system atrophy.

35. (Currently amended) Use of the deuterated catecholamine derivatives according to ~~one of~~ claims claim 1 to 33 as well as physiologically compatible salts thereof, in combination with an enzyme inhibitor or several enzyme inhibitors, for the treatment of dopamine deficiency diseases or diseases which are based on disrupted tyrosine transport or disrupted tyrosine decarboxylase, such as Parkinson's disease, restless leg syndrome, dystonia, for inhibiting prolactin secretion, for stimulating the release of growth hormone, for the treatment of neurological symptoms of chronic manganese intoxications, of amyotrophic lateral sclerosis and of multiple system atrophy.

36. (Original) Use of deuterated catecholamine derivatives according to claim 35 as well as physiologically compatible salts thereof, further characterized in that the enzyme inhibitor or the enzyme inhibitors involve decarboxylase inhibitors and/or catechol-O-methyltransferase inhibitors and/or monoamine oxidase inhibitors and/or β -hydroxylase inhibitors.

37. (Original) Use of deuterated catecholamine derivatives according to claim 36 as well as physiologically compatible salts thereof, further characterized in that the decarboxylase inhibitor is selected from the group consisting of D,L-serine 2-(2,3,4-trihydroxybenzyl) hydrazide (benserazide), (-)-L- α -hydrazino-3,4-dihydroxy- α -methylhydrocinnamic acid (carbidopa), L-serine 2-(2,3,4-trihydroxybenzyl) hydrazide, glycine 2-(2,3,4-trihydroxybenzyl) hydrazide and L-tyrosine 2-(2,3,4-trihydroxybenzyl) hydrazide as well as physiologically compatible salts

thereof.

38. (Original) Use of the deuterated catecholamine derivatives according to claim 36 as well as physiologically compatible salts thereof further characterized in that the catechol-O-methyltransferase inhibitor is selected from entacapone and cabergoline as well as physiologically compatible salts thereof.

39. (Original) Use of the deuterated catecholamine derivatives according to claim 36 as well as physiologically compatible salts thereof, further characterized in that the monoamine oxidase inhibitor is selected from the group consisting of selegiline, moclobemide and tranylcypromine as well as physiologically compatible salts thereof.

40. (Original) Use of the deuterated catecholamine derivatives according to claim 36 as well as physiologically compatible salts thereof, further characterized in that the β -hydroxylase inhibitor is selected from calcium 5-butyl picolinate and calcium 5-pentyl picolinate as well as physiologically compatible salts thereof.

41. (Currently amended) Use of the deuterated catecholamine derivatives according to ~~one of~~ claims claim 1 to 33 as well as physiologically compatible salts thereof, for the production of pharmaceuticals for the treatment of Parkinson's disease, restless leg syndrome, of amyotrophic lateral sclerosis and of multiple system atrophy.

42. (Currently amended) A pharmaceutical composition, which contains deuterated catecholaminated according to ~~one of claims~~ claim 1 to 33 as well as physiologically compatible salts thereof, for the treatment of Parkinson's disease, of restless leg syndrome, of dystonia, for inhibiting prolactin secretion, for stimulating the release of growth hormone, for the treatment of neurological symptoms of chronic manganese intoxications, of amyotrophic lateral sclerosis and of multiple system atrophy, in addition to pharmaceutically compatible adjuvants and additives.

43. (Currently amended) A pharmaceutical composition, which contains deuterated catecholamine derivatives according to ~~one of claims~~ claim 1 to 33 as well as physiologically compatible salts thereof, for the treatment of Parkinson's disease, restless leg syndrome, dystonia, for inhibiting prolactin secretion, for stimulating the release of growth hormone, for the treatment of neurological symptoms of chronic manganese intoxications, of amyotrophic lateral sclerosis and of multiple system atrophy, as well as one or more enzyme inhibitors, in addition to pharmaceutically compatible adjuvants and additives.

44. (Original) The pharmaceutical composition according to claim 43, further characterized in that the enzyme inhibitor or the enzyme inhibitors involve decarboxylase inhibitors and/or catechol-O-methyltransferase inhibitors and/or monoamine oxidase inhibitors and/or β -hydroxylase inhibitors.

45. (Original) The pharmaceutical composition according to claim 43, further characterized in that the decarboxylase inhibitor is selected from the group consisting of D,L-serine 2-(2,3,4-

trihydroxybenzyl) hydrazide (benserazide), (-)-L- α -hydrazino-3,4-dihydroxy- α -methylhydrocinnamic acid (carbidopa), L-serine 2-(2,3,4-trihydroxybenzyl) hydrazide, glycine 2-(2,3,4-trihydroxybenzyl) hydrazide and L-tyrosine 2-(2,3,4-trihydroxybenzyl) hydrazide as well as physiologically compatible salts thereof.

46. (Original) The pharmaceutical composition according to claim 43, further characterized in that the catechol-O-methyltransferase inhibitor is selected from entacapone and cabergoline as well as physiologically compatible salts thereof.

47. (Original) The pharmaceutical composition according to claim 43, further characterized in that the monoamine oxidase inhibitor is selected from the group consisting of selegiline, moclobemide and tranylcypromine as well as physiologically compatible salts thereof.

48. (Original) The pharmaceutical composition according to claim 43, further characterized in that the β -hydroxylase inhibitor is selected from calcium 5-butyl picolinate and calcium 5-pentyl picolinate as well as physiologically compatible salts thereof.

49. (Currently amended) Use of the deuterated catecholamine derivatives according to ~~one of~~ claims claim 1 to 33 as well as physiologically compatible salts thereof, for the prophylaxis of psychoses, particularly also of schizophrenia, as well as for the treatment of acute psychoses, particularly in the case of negative symptomatology and particularly also schizophrenia.

50. (Currently amended) Use of the deuterated catecholamine derivatives according to ~~one of~~ claims claim 1 to 33 as well as physiologically compatible salts thereof, in combination with one or more enzyme inhibitors, for the prophylaxis of psychoses, as well as for the treatment of acute psychoses, particularly in the case of negative symptomatology.

51. (Original) Use of the deuterated catecholamine derivatives according to claim 50 as well as physiologically compatible salts thereof, further characterized in that the enzyme inhibitor or the enzyme inhibitors involve decarboxylase inhibitors and/or catechol-O-methyltransferase inhibitors and/or monoamine oxidase inhibitors and/or β -hydroxylase inhibitors.

52. (Original) Use of the deuterated catecholamine derivatives according to claim 51 as well as physiologically compatible salts thereof, further characterized in that the decarboxylase inhibitor is selected from the group consisting of D,L-serine 2-(2,3,4-trihydroxybenzyl) hydrazide (benserazide), (-)-L- α -hydrazino-3,4-dihydroxy- α -methylhydrocinnamic acid (carbidopa), L-serine 2-(2,3,4-trihydroxybenzyl) hydrazide, glycine 2-(2,3,4-trihydroxybenzyl) hydrazide and L-tyrosine 2-(2,3,4-trihydroxybenzyl) hydrazide as well as physiologically compatible salts thereof.

53. (Original) Use of the deuterated catecholamine derivatives according to claim 51 as well as physiologically compatible salts thereof, further characterized in that the catechol-O-methyltransferase inhibitor is selected from entacapone and cabergoline as well as physiologically compatible salts thereof.

54. (Original) Use of the deuterated catecholamine derivatives according to claim 51 as well as physiologically compatible salts thereof, further characterized in that the monoamine oxidase inhibitor is selected from the group, consisting of selegiline, moclobemide and tranylcypromine as well as physiologically compatible salts thereof.

55. (Original) Use of the deuterated catecholamine derivatives according to claim 51 as well as physiologically compatible salts thereof, further characterized in that the β -hydroxylase inhibitor is selected from calcium 5-butyl picolinate and calcium 5-pentyl picolinate as well as physiologically compatible salts thereof.

56. (Currently amended) Use of the deuterated catecholamine derivatives according to ~~one of~~ claims claim 1 to 33 as well as physiologically compatible salts thereof, for the production of pharmaceuticals for the prophylaxis of psychoses as well as for the treatment of acute psychoses, particularly in the case of negative symptomatology.

57. (Currently amended) A pharmaceutical composition, which contains deuterated catecholamines according to ~~one of claims claim 1 to 33~~ claim 1 to 33 as well as physiologically compatible salts thereof, for the prophylaxis of psychoses as well as for the treatment of acute psychoses, particularly in the case of negative symptomatology, in addition to pharmaceutically compatible adjuvants and additives.

58. (Currently amended) Pharmaceutical composition, which contains deuterated catecholamine derivatives according to ~~one of claims~~ claim 1 to 33 as well as physiologically compatible salts thereof, for the prophylaxis of psychoses and for the treatment of acute psychoses, particularly in the case of negative symptomatology, as well as one or more enzyme inhibitors, in addition to pharmaceutically compatible adjuvants and additives.

59. (Original) The pharmaceutical composition according to claim 58, further characterized in that the enzyme inhibitor or the enzyme inhibitors involve decarboxylase inhibitors and/or catechol-O-methyltransferase inhibitors and/or monoamine oxidase inhibitors and/or β -hydroxylase inhibitors.

60. (Original) The pharmaceutical composition according to claim 59, further characterized in that the decarboxylase inhibitor is selected from the group consisting of D,L-serine 2-(2,3,4-trihydroxybenzyl) hydrazide (benserazide), (-)-L- α -hydrazino-3,4-dihydroxy- α -methylhydrocinnamic acid (carbidopa), L-serine 2-(2,3,4-trihydroxybenzyl) hydrazide, glycine 2-(2,3,4-trihydroxybenzyl) hydrazide and L-tyrosine 2-(2,3,4-trihydroxybenzyl) hydrazide as well as physiologically compatible salts thereof.

61. (Original) The pharmaceutical composition according to claim 59, further characterized in that the catechol-O-methyltransferase inhibitor is selected from entacapone and cabergoline as well as physiologically compatible salts thereof.

62. (Original) The pharmaceutical composition according to claim 59, further characterized in that the monoamine oxidase inhibitor is selected from the group consisting of selegiline, moclobemide and tranylcypromine as well as physiologically compatible salts thereof.

63. (Original) The pharmaceutical composition according to claim 59, further characterized in that the β -hydroxylase inhibitor is selected from calcium 5-butyl picolinate and calcium 5-pentyl picolinate as well as physiologically compatible salts thereof.